REMARKS

Claims 1-3, 5-8, 10, 11, 13, 14, 16-20 and 26 presently appear in this case. No claims have been allowed. Claims 17-20 and 54 have been withdrawn from consideration. The Official Action of July 23, 2009, has now been carefully studied. Reconsideration and allowance are hereby respectfully urged.

Briefly, the present invention relates to a lipid assembly which includes a biologically active non-liposome forming lipid, a lipopolymer, and a liposome forming lipid. The biologically active non-liposome forming lipid has a hydrophobic region and a polymer headgroup wherein the atomic mass ratio between the head group and the hydrophobic region is less than 0.3. The lipopolymer has a hydrophobic lipid region and a hydrophilic polymer headgroup and a atomic mass ratio between the head group and the hydrophobic region is at least 1.5. The lipid assembly is chemically and physically stable under storage conditions of 4°C in biological fluids for at least six months. The invention also relates to a pharmaceutical composition comprising the lipid assembly and a physiologically acceptable carrier. The lipid assembly is present in an amount sufficient to achieve a biological effect at a target site.

The examiner has repeated and made final the unity of invention requirement. The examiner states that the lipid assembly of claim 1 does not present a contribution over the prior art in view of the Wei patent. This requirement is again respectfully traversed.

It will be shown hereinbelow why the present claims are all patentable over Wei. Accordingly, the present claims share a special technical feature and once the examiner determines the patentability of the elected claims, the non-elected claims must be rejoined. Claim 54, however, has now been deleted without prejudice toward the continuation of prosecution thereof in a divisional application.

The examiner's statements about how to submit an information disclosure statement are noted.

Claims 2, 4-8 and 14 have been objected to as being of improper dependent form for failing to further limit the subject matter of a previous claim. The examiner states that it is unclear if the lipid matrix of claim 1 further comprises a lipid matrix or is in the form of a lipid matrix.

Claim 1 has now been amended add, as a third component of the lipid assembly, a liposome forming lipid. This is supported, for example, on page 8, line 6-10, of the

present specification. Claims 2, 5-8 and 14 have been amended to have language corresponding to that added to claim 1. Accordingly, this objection has now been obviated.

Claim 3 has been rejected under 35 USC 112, second paragraph, as being indefinite. The examiner states that the claim recites the limitation "at least about."

Claim 3 has now been amended to delete the term "about", thus obviating this part of the rejection.

The examiner states that claim 6 is indefinite and that the structure diagram that is shown in claim 6 shows R_1, R_2 and R, whereas the claims define R_1, R_2 and R_3.

The formula in claim 6 has now been amended to clarify that the R group on the right hand side of the formula is R_3.

The examiner considers claims 11 and 16 to be indefinite because claim 11 depends upon cancelled claim 9 and claim 16 depends upon cancelled claim 12.

Claim 11 has now been amended to depend from claim 10 and claim 16 has now been amended to depend from claim 14. Accordingly, this part of the rejection has also now been obviated.

Claims 1, 2, 4, 5, 10, 14, 16 and 26 have been rejected under 35 USC 103(a) as being unpatentable over Wei as evidenced by Kumar. The examiner states that Wei, in

Example 7, teaches liposomal formulations of C2 and C6 ceramides and that Tables 5 and 6 further show that liposomes were prepared with free non-ciliated C6 ceramides as well as silylated C6 ceramides. The examiner states that the liposome of Wei includes phosphatidylcholine. The examiner concedes that the picking and choosing of the specific combination of features presently claimed does not give rise to anticipation by the disclosure of Wei. The examiner considers it to have been obvious to have selected various combinations of various disclosed ingredients which are a lipopolymer and a pharmaceutically acceptable carrier from within a prior art disclosure to arrive at compositions yielding no more than one would expect from such an arrangement. The examiner states that Wei does not teach that the lipid assembly is stable at 4°C for six months but this would be an expected property of a lipid assembly consisting of ceramide and pegylated lipid as there are no oxidatively labile groups in ceramide and it is shielded due to the presence of PEG. The examiner points to page 71 of the specification for a showing that PEG causes the destabilization of lipid assemblies. The examiner concedes that Wei does not teach that the biologically active lipid has an atomic mass ratio of hydrophobic to hydrophilic region that is less than 0.3 but the examiner considers this

to be an expected property of ceramide. The examiner concedes that Wei does not specifically teach that the additive packing parameter of the lipid assembly is between the range of 0.74 and 1, but the examiner considers this to be an expected property of the composition formed containing pegylated lipids and ceramide to form a liposome. This rejection is respectfully traversed.

It is the examiner's position that the present invention is obvious because the results of the claimed composition of parameters "yield no more than one would expect from such an arrangement." However, this is not correct. Only by means of the presently claimed combination of parameters can one get storage stability of the lipid assembly for over six months. The examiner states, without proof, that stability for six months would be an expected property of a lipid assembly consisting of ceramide and a pegylated lipid. However, it is important to understand that the claims do not speak of the stability of the ceramide; the claims speak of the stability of the lipid assembly. The examiner does not refer to anything available at the time of the present invention that would suggest that a combination of ceramide and a pegylated lipid would be expected to yield a lipid assembly with a storage life of over six months.

The examiner points to page 71 of applicant's own specification for a showing that PEG causes the stabilization of lipid assemblies. However, it should go without saying that one cannot rely on applicant's specification as prior art. Nor can the examiner rely on applicant's invention to make obvious applicant's invention. As stated in *In re Ruff*, 118 USPQ 340, 347 (CCPA 1958):

> To rely on an equivalence known only to the applicant to establish obviousness is to assume that his disclosure is a part of the prior art. The mere statement of this proposition reveals its fallaciousness. [emphasis original]

The present specification states, for example at page 9, in the paragraph headed "Stable Lipid Assembly," that the stability of the assembly, i.e., physical stability under storage conditions for at least six months, is accomplished by the combination of biologically active lipid as defined above with the defined lipopolymer. The examiner has only established that ceramides are known in lipid assemblies and lipopolymers are known in lipid assemblies but neither the Wei reference nor any of the examiner's explanations make obvious the unexpected results of the present invention, i.e., that with the particular combination of ingredients, one gets the outstanding storage stability for over six months.

For all of these reasons, claim 1 and those claims dependent therefrom are not made obvious by Wei, either considered alone or in combination with Kumar. It is noted that Kumar is not cited for any factor relating to increased storage stability. Accordingly, reconsideration and withdrawal of this rejection are respectfully urged.

Claims 6 to 8 have been rejected under 35 USC 103(a) as being unpatentble over Wei, as applied to claim 5, and further in view of Cuvillier. The examiner states that Cuvillier makes obvious the use of N,N-dimethylsphingosine as the biologically active lipid. This rejection is respectfully traversed.

Claims 6 to 8 are allowable for the same reasons as discussed above with respect to claim 1 from which they ultimately depend. Cuvillier adds nothing concerning the deficiencies of Wei as discussed above. Reconsideration and withdrawal of this rejection are therefore also respectfully urged.

Claims 3, 11 and 13 have been rejected under 35 USC 103(a) as being unpatentable over Wei as applied to claim 1 and further in view of Nicholas as evidenced by Tirosh. The examiner concedes that Wei does not teach liposomes with pegylated lipids wherein the molecular weight of PEG is 2000 daltons as in claims 11 and 12. The examiner

considers this to be obvious from Nicholas. The examiner states that Nicholas teaches that pegylated lipids stabilize liposomes, citing page 167, left column. This rejection is respectfully traversed.

Nicholas adds nothing to the deficiencies of Wei as discussed above. The examiner states that Nicholas teaches that pegylated lipids cause improvement of stability of liposomes. However, the sentence upon which the examiner relies reads:

> The value of using vesicles (liposomes) with surface coatings of water-soluble polymers as a means of stabilizing liposomes in the blood circulation is now well established [1-5]. In particular the incorporation of phospholipid-grafted polyoxyglycol (PEG) to form Stealth liposomes has been extensively studied [6-11].

However, this language speaks of stabilization of liposomes in the blood circulation. It certainly does not suggest that the particular combination of the present invention will allow storage stability for six months. Accordingly, Nicholas does not supply any of the deficiencies of Wei and these claims are allowable for the same reasons as discussed above for claim 1. Reconsideration and withdrawal of this rejection are also respectfully urged.

It is submitted that all of the claims now present in the case clearly define over the references of record and

fully comply with 35 U.S.C. 112. Reconsideration and allowance are therefore earnestly solicited.

Respectfully submitted,

BROWDY AND NEIMARK, P.L.L.C.
Attorneys for Applicant(s)

By /rlb/
Roger L. Browdy
Registration No. 25,618

RLB:jhw
Telephone No.: (202) 628-5197
Facsimile No.: (202) 737-3528
G:\BN\C\cohn\Barenholz9a\Pto\2009-12-23 Amd.doc